

R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 1-20 under 35 U.S.C. §103(a) as being unpatentable over Chan et al. '505 (hereafter Chan) in view of Cimini et al. '933 (hereafter Cimini) is respectfully traversed and should be withdrawn.

Chan concerns a hybrid routing architecture for high density complex programmable logic device (Title). Cimini concerns a clustered OFDM communication system (Title).

Claim 1 provides an assembly apparatus, a programmable logic device mounted to the assembly apparatus and a die mounted to the assembly apparatus. In contrast, both Chan and Cimini appear to be silent regarding both a programmable logic device and a die both mounted to an assembly apparatus. Therefore, Chan and Cimini, alone or in combination, do not appear to teach or suggest an assembly apparatus, a programmable logic device mounted to the assembly apparatus and a die mounted to the assembly apparatus as presently claimed.

Furthermore, the Office Action fails to identify where Chan teaches an element similar to the claimed assembly apparatus. In particular, Chan appears to be silent regarding a "pc, system, motherboard" as alleged on page 2 of the Office Action. Therefore, *prima facie* obviousness has not been established. The Examiner is

respectfully requested to either (i) clearly identify the element of Chan allegedly similar the claimed assembly apparatus or (ii) withdrawn the rejection.

Furthermore, the Office Action appears to allege that a CPLD 400 of Chan is simultaneously similar to both the claimed programmable logic device and the claimed die. One of ordinary skill in the art would not appear to understand one reference element to simultaneously teach two claimed elements. Therefore, the Office Action has failed to establish that the references teach or suggest all of the claim limitations.

Claim 1 further provides that the die is configured to (i) convert between a first serial data signal and a first parallel data signal and (ii) couple a first of a plurality of routing channels of the programmable logic device to exchange the first parallel signal with at least one of a plurality of logic block clusters in the programmable logic device. Assuming, *arguendo*, that combining Chan and Cimini may have been obvious (for which Applicants' representative does not necessarily agree), the proposed combination appear to couple a **serial encoded signal 19** of Cimini with the CPLD 400 of Chan. Therefore, the proposed combination does not appear to teach or suggest a die configured to (i) convert between a first serial data signal and a first parallel data signal and (ii) couple a first of a plurality of routing channels of a programmable logic device to exchange the **first**

**parallel signal** with at least one of a plurality of logic block clusters in the programmable logic device as presently claimed.

Furthermore, the Office Action fails to provide clear and particular evidence of motivation to combine the references. The alleged motivation on page 3 of the Office Action to reduce a power ratio during signal transmissions appears to explain why one of ordinary skill in the art would use Cimini instead of conventional OFDM communications systems, but does not appear to explain why one of ordinary skill in the art would combine Cimini with Chan. The fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness (MPEP §2143.01). Therefore, *prima facie* obviousness has not been established. The Examiner is respectfully requested to either (i) provide evidence explaining why one of ordinary skill in the art would view the alleged motivation as a reason to combine the references or (ii) withdraw the rejection.

Furthermore, Chan and Cimini appear to be non-analogous art. Chan has a primary US classification of 326/41. In contrast, Cimini has a primary US classification of 370/208. In the absence of evidence to the contrary, the US classification system suggests that Chan and Cimini are non-analogous art. Therefore, *prima facie* obviousness has not been established. The Examiner is respectfully requested to either (i) provide evidence that Chan and Cimini are analogous art as argued or (ii) withdraw the rejection. Claims 11 and 19 provide language similar to claim 1. As such, the claimed

invention is fully patentable over the cited references and the rejection should be withdrawn.

Claim 2 provides a die comprising (from claim 1) a first communication channel and (from claim 2) a second communication channel. Despite the assertion on page 3 of the Office Action, Cimini does not appear to discuss a die having two communication channels. Therefore, Chan and Cimini, alone or in combination, do not appear to teach or suggest a die comprising a first communication channel and a second communication channel as presently claimed. Claim 12 provides language similar to claim 2. As such, claims 2 and 12 are fully patentable over the cited references and the rejection should be withdrawn.

Claim 3 provides a die comprising (from claim 1) a first communication channel, (from claim 2) a second communication channel and (from claim 3) a third communication channel. Despite the assertion on page 3 of the Office Action, Cimini does not appear to discuss a die having three communications channels. Therefore, Chan and Cimini, alone or in combination, do not appear to teach or suggest a die comprising a first communication channel, a second communication channel and a third communication channel as presently claimed. Claim 13 provides language similar to claim 3. As such, claims 3 and 13 are fully patentable over the cited references and the rejection should be withdrawn.

Claim 4 provides a die comprising (from claim 1) a first communication channel, (from claim 2) a second communication channel, (from claim 3) a third communication channel and (from

claim 4) a fourth communication channel. Despite the assertion on page 3 of the Office Action, Cimini does not appear to discuss a die having four communications channels. Therefore, Chan and Cimini, alone or in combination, do not appear to teach or suggest a die comprising a first communication channel, a second communication channel, a third communication channel and a fourth communication channel as presently claimed. Claim 14 provides language similar to claim 4. As such, claims 4 and 14 are fully patentable over the cited references and the rejection should be withdrawn.

Claim 5 provides a die configured to (from claim 1) couple a first routing channel to exchange a first parallel data signal and (from claim 5) couple the first routing channel to exchange a second parallel data signal. Despite the assertion on page 3 of the Office Action, both Chan and Cimini appear to be silent regarding coupling one routing channel to two parallel data signals as presently claimed. Therefore, *prima facie* obviousness has not been established. Claims 15 and 18 provide language similar to claim 5. As such, the Examiner is respectfully requested to either (i) clearly identify where Chan or Cimini allegedly discuss coupling two parallel data signals to one routing channel or (ii) withdraw the rejections to claims 5, 15 and 18.

Claim 6 provides the first communication channel in the die receiving a control signal from one of a plurality of logic block clusters in the programmable logic device. Page 3 of the Office Action cites column 7, lines 25-44 of Chan as teaching an

output signal from a routing channel allegedly similar to the claimed control signal. However, Cimini appears to be silent regarding a first communication channel configured to receive the alleged control signal of Chan. Therefore, *prima facie* obviousness has not been established for lack of evidence that the references teach or suggest all of the claimed elements. Claims 8, 16 and 17 provide language similar to claim 6. As such, the Examiner is respectfully requested to either (i) clearly identify (a) the signal in Chan allegedly similar to the claimed control signal and (b) the input in Cimini suitable for receiving the alleged control signal of Chan or (ii) withdraw the rejections for claims 6, 8, 16 and 17.

Claim 8 provides that the first communication channel of the die presents a status signal to at least one of a plurality of logic block clusters of the programmable logic device. Page 4 of the Office Action asserts that column 7, lines 25-44 of Chan teach reception of a signal allegedly similar to the claimed status signal. However, Cimini appears to be silent regarding a first communication channel presenting a status signal similar to that of Chan. Therefore, *prima facie* obviousness has not been established for lack of evidence that the references teach or suggest all of the claim elements. The Examiner is respectfully requested to either (i) clearly identify (a) the signal of Chan allegedly similar to the claimed status signal and (b) the output of Cimini allegedly presenting the alleged status signal or (ii) withdrawn the rejection.

Claim 20 provides that the first communication channel is a transmit channel and the second communication channel is a receive channel associated with the transmit channel. The Office Action admits on pages 2 and 3 that Chan does not disclose a first communication channel or a second communication channel. Furthermore, despite the assertion on page 7 of the Office Action, column 4, lines 44-57 of Cimini appear to be silent regarding two communication channels where a first is a transmit channel and a second is a receive channel as presently claimed. Therefore, Chan and Cimini, alone or in combination, do not appear to teach or suggest a first communication channel is a transmit channel and a second communication channel is a receive channel associated with the transmit channel as presently claimed. As such, claim 20 is fully patentable over the cited references and the rejection should be withdrawn.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

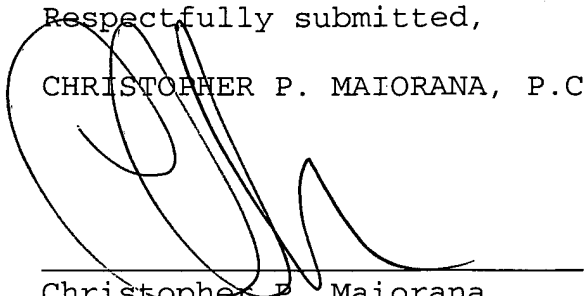
The Examiner is respectfully invited to call the Applicants' representative should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge our office

Account No. 50-0541.

Respectfully submitted,

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